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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,380

10/23/2006

Kenichi Adachi

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EXAMINER

ZHE, MENG YAO

ART UNIT

PAPER NUMBER

2195

NOTIFICATION DATE

DELIVERY MODE

03/29/2012

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

INFO@GDIPLAW.COM
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Office Action Summary	Application No. 10/589,380	Applicant(s) ADACHI ET AL.	
	Examiner MENGYAO ZHE	Art Unit 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-4,9,20 and 24 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-4,9,20 and 24 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 15 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: ____. |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :8/15/06 12/18/06 8/31/07 1/3/08 6/26/08 4/21/09 7/1/09 9/8/09 3/2/10 5/14/10 5/18/11.

DETAILED ACTION

1. Claims 1-4, 9, 20, 24 are presented for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 24 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 24 is rejected under 35 U.S.C. 101 because it appears to be a system claim; however, it appears that the system would reasonably be interpreted by one of ordinary skill in the art as software, per se, failing to be tangibly embodied or include any recited hardware as part of the system such as processor or memory. Specifically the units claimed by the applicant may merely be software components.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1-4, 9, 20, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durham et al., Patent No. 6,000,036 (hereafter Durham).

5. As per claims 1, 9, 20, 24, Durham teaches a processor comprising:

a heat release frequency holding unit which holds a power dissipation of a plurality of blocks subject to heat release control (Column 3, lines 55-65; Column 4, lines 5-20);

a power dissipation identifying unit which identifies a block involved in the execution of each execution unit comprising at least one instruction, and which identifies a heat release coefficient related to a heat value of the identified block (Column 5, lines 17-23);

and a power dissipation adder unit which cumulatively increases, for each execution unit, the power dissipation of the identified block by referring to the power dissipation coefficient, as the execution of instructions proceeds (Column 5, lines 14-23);

a scheduler which allocates instructions to be executed among the plurality of subprocessors in accordance with the power dissipation of the blocks (Column 4, lines 12-30).

Durham does not specifically state that heat release frequency is being measured. However, because Durham teaches measuring power dissipation that includes temperature release frequency which in turn reflects heat dissipation, it would

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have been obvious to one having ordinary skill in the art at the time of the applicant's invention that Durham's power dissipation measurement is a type of heat release frequency measurement (Column 5, lines 40-45, 60-63; Column 4, lines 62-67).

6. As per claim 2, Durham does not specifically teach wherein the heat release identifying unit is a decoder for decoding instructions to be executed.

However, Durham does teach measure heat release for various functional units of a processor and since a decoder is commonly used in the processor to process instructions (Column 3, lines 20-32), it would have been obvious to one having ordinary skill in the art at the time of the applicant's invention that a decoder is also part of the functional unit heat dissipation measurement.

7. As per claims 3, 4, Durham does not specifically teach a heat release frequency subtractor unit which subtracts from the heat release frequency of the blocks in accordance with heat discharge that occurs with time.

However, because regular heat discharge is common phenomenon of powering on a processor, in order to obtain the actual value of the heat release of processor actually executing instructions, it would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to subtract the heat discharge in order to obtain the actual value of the heat dissipation for executing the instructions alones.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MENGYAO ZHE whose telephone number is (571)272-6946. The examiner can normally be reached on Monday Through Friday, 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mengyao Zhe/